HARSHIT SOHANEY

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EXPERIENCE

Application Developer Co-op | Softchoice Corp.   📅 May 2022 – August 2022

- Improved the frontend and backend for **Single Page Applications (SPA)** on the company portal using **.NET Core** to help users navigate items efficiently
- Optimized API logging tables with **Object Relational Mapping (ORM)** using **LINQ to SQL** queries to improve access time from 30 seconds to 2 seconds
- Implemented a planning interface by creating APIs to assist in determining development time and creating tasks

Firmware Member | UofT Aerospace Team   📅 Sep 2020 - Present

- Configuring SD Card data transfer using an **STM32H743** Developer Board and an Arduino Uno. Debugging the **FatFs** file system to manually transfer and receive data from the optical system to store CO_2 emission data efficiently
- Automating satellite to ground station communication using **Python** to coordinate different commands by tracking TX and RX signals

Project Lead | Google Solution Challenge   📅 Dec 2020 – May 2021

- Applied **SCRUM** management techniques to coordinate a team of 4 in prototyping a web-app hosting the lost & found system of Toronto
- Designed a real time **NoSQL** database using **Firestore** to keep store all reports received and tracked
- Integrated and constructed multiple parts of the application using **JavaScript** to bring together all components created by the team

PROJECT HIGHLIGHTS

GIS Mapping System | University of Toronto ECE297   📅 Jan 2022 - May 2022

- Developed a navigation system using the OpenStreetMap database with **C++**. Iterated to improve movement speed by 98% to make the app user friendly
- Applied algorithms such as **Breadth First Search, Dijkstra**, and **A*** to optimize pathfinding and included various features to accompany the algorithms (directions, subways, search bar)
- Employed heuristic algorithms such as **2-opt** and **Simulated Annealing** with techniques like **multi-threading** to find an optimum solution to the Travelling Salesman Problem

Fake News Detection AI | Coursera   📅 May 2020

- Trained a **LSTM** network using Natural Language Processing (NLP) tools such as **tensorflow, nltk, pandas, keras**, that can detect false news on social media
- Gained an understanding of ML concepts such as **NLP, Feature Engineering** and **Recurrent Neural Networks** on a dataset of over 40,000 articles

ACHIEVEMENTS

- **Second Place Prize** winner against 20 teams at ENACTUS UofT Innovation Pitch Competition for a social venture
- **School Medal** for scoring the highest score on the University of Waterloo Euclid Mathematics Exam within the school

EDUCATION

B.A.Sc. in Computer Engineering
University of Toronto
📅 September 2020 – May 2024

Minor in Artificial Intelligence
Dean's List recipient - Winter 2020 - 2021, Fall 2021

Courses

Data Structures & Algorithms, Operating Systems, Intro to Deep Learning, Probability & Statistics, Linear Algebra

Clubs & Positions

ECE Ambassador, **UofTHacks** - Executive, **Digital Society** - Events Director, **Learn AI** - Curriculum Content Lead, **ECE Club** - Events Director, **UofT Aerospace Design Team** - Firmware & Optics, Performing Musician

TECHNICAL SKILLS

Programming

Software

C/C++ Python C# Git
AngularJS MATLAB

Web

JavaScript AngularJS
HTML5/CSS3 jQuery React

Skills

Agile Development SCRUM
Software Communication
Engineering Design

Machine Learning

PyTorch Numpy TensorFlow
NLTK Matplotlib Pandas

Software and Frameworks

MySQL OOP
.NET Development
MVC Architecture LINQ
GCP STM32CUBE